

mirabilis, Retzer, is identical with the *Ephydatia amphizona* described by me cannot be decided from Retzer's description and sketchy figures; a comparison of the types described by Retzer is very desirable.

P.S.—After I had completed the manuscript of these remarks I received from Dr. Anton Wierzejski, of Cracow, some preparations of the freshwater sponges occurring in Galicia, among which, to my surprise, I also found *Spongilla fragilis*, Leidy. We must await Dr. Wierzejski's monograph of the Spongillid fauna, which is shortly to appear, for details as to the peculiarities of this freshwater sponge, which is evidently very characteristic of the Palæarctic and Nearctic regions.

III.—*Note on Spongilla fragilis, Leidy, and a new Species of Spongilla from Nova Scotia.* By H. J. CARTER, F.R.S. &c.

WITH reference to the "P.S." to Prof. F. Vejdovsky's 'Observations' (*supra*), I would here remark that Mr. Stuart O. Ridley, F.L.S., of the British Museum, has lately sent me a specimen of *Spongilla fragilis*, Leidy, as I have described it under the name of *S. Lordii*, Bk. ('Annals,' Feb. 1881, vol. vii. p. 89), which he discovered in the river Wye, about ten miles above Hereford, England, in August last, growing over the internal surface of a valve of *Unio margaritiferus*. This is the first time that this species of freshwater sponge has been recognized in England. The prolonged aperture of the chitinous coat is not turned to one side, but simply vertical, as in *S. Lordii*, with a delicate film (for the specimen is dry) of sarcode stretched across its mouth.

On the 8th August last, too, I received from A. H. MacKay, B.A., B.Sc., of the Pictou Academy, Pictou, a similar specimen growing over a small branch of wood, together with the variety called "*segregata*" by Mr. Edward Potts, of Philadelphia, which Mr. MacKay had found in MacIntosh Lake, Nova Scotia.

Further, on the 26th August following I received another collection of freshwater sponges, obtained by Mr. MacKay from the lakes near Pictou, in Nova Scotia, among which are good-sized specimens of the following:—

Spongilla lacustris, var. *lacustrioides*, Potts (the American representative of *S. lacustris*, auct.), from Lakes MacIntosh, Forbes, Lochaber, and Black Brook, East River, St. Mary's, respectively.

Meyenia fluviatilis, auct. Garden-of-Eden Lake.

— *Everetti*, Mills. MacKay's Lake.

Heteromeyenia Ryderi, Potts. MacKay's Lake.

— *argyrosperma*, Potts. Garden-of-Eden Lake.

Together with a specimen of another species which, until just now that I have had occasion to examine it more particularly, I thought had been *Spongilla fragilis*, var. *segregata*. However, it turns out to be very different; and being *new*, I herewith append its description under the name of

Spongilla Mackayi.

Sessile, spreading, charged with little subglobular bodies like large statoblasts, about 1-12th inch in diameter. Skeletal spicule acerate, slightly curved, sharp-pointed, more or less thickly spined, averaging 50 by $2\frac{1}{2}$ -6000ths inch in its greatest diameters; accompanied abundantly by a minute birotulate flesh-spicule precisely like that of *Meyenia Everetti*, that is 3 to 4-6000ths inch long, with very thin smooth shaft about four times longer than the diameter of the rotule, which is 1-6000th inch, toothed, with the teeth recurved. Statoblast globular, consisting of a thick chitinous coat filled with the usual germinal matter, from which is very slightly prolonged an everted trumpet-shaped aperture; bearing slight traces externally of microcell-structure and the polygonal tissue; making one of twenty such which are so arranged as to form a subglobular body of the size mentioned; situated around a central cavity with their apertures *inwards*; the whole supported by statoblast-spicules of various sizes, which, intercrossing each other, form a nest-like globular capsule in which the outer parts of the statoblasts are fixed and covered; apparently (for the specimen is dry) deficient at one point, which leads into the central cavity. Statoblast-spicules acerate, sharp-pointed, like the skeletal spicules, but becoming much shorter and more coarsely spined as they approach the chitinous coats of the statoblasts, where they may be reduced to at least 27-6000ths inch in length, although often increased to 4-6000ths inch in thickness, and their spines, which are very irregular in size and situation, often as long as the spicule is broad. Size of specimen about 1-6th inch high and 2 inches in horizontal diameter.

Hab. Freshwater.

Loc. Mackay's Lake, near Pictou, Nova Scotia.

Obs. The most remarkable point presented by this species is that its flesh-spicule should be identical with that of *Meyenia Everetti*, whose statoblast is covered with a thick crust of long and large birotules, denticulated, with recurved teeth like those of *Meyenia Baileyi* &c., showing that this kind of flesh-spicule may be present in totally different species of freshwater sponges, unless it should be owing to the presence and proximity of *M. Everetti*, which, as above stated, grows in the same lake.

It is remarkable, too, that the spiculation of *Spongilla Mackayi*, both skeletal and flesh-, should be almost identical with those which I have described and illustrated of the freshwater sponge-spicules so abundant in the diluvial deposits of the Altmühl valley, in Bavaria ('Annals,' Nov. 1883, vol. xii. p. 329 &c., pl. xiv. fig. 18, *a, b, g, h, i*).

IV.—On the wide Distribution of some American Freshwater Sponges. By E. POTTS*.

ALLUSION having been made to the wide distribution of certain species of spiders over the North-American continent, Mr. E. Potts, referring to the freshwater sponge-fauna of this country, said that *Spongilla fragilis*, the first species named in America, described by Dr. Leidy in 1851 from specimens collected near Philadelphia, had since been found abundantly along the Atlantic coast from Florida to Nova Scotia. It had been gathered at several points along the St. Lawrence and in the great lakes through the middle continent, and in the far west had been described by Dr. Bowerbank, in 1863, under the name of *S. Lordii*, as found in the lakes and streams flowing from the Cascade Range in British Columbia, affluents of the majestic Columbia river. The species may therefore be regarded as strictly continental in its range, and until very recently it has been distinctively American. It is a little singular that the only other place in which it has been noticed is in the neighbourhood of Charkow, in Russia, where it was discovered a few months since by Dr. L. Dybowski.

The specimens of this species from Nova Scotia had been collected by Mr. A. H. MacKay, B.A., B.Sc., of Pictou

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